



Ø BEAT



COLO. SPRINGS,
COLORADO

APRIL 1982

73's — TNX — ES PSE QSL

QSL CARDS

Upgraded your ticket recently? Or maybe just ready for a change? If it's time to update your QSL and you're tired of having the same thing as everybody else, then a custom QSL is what you're looking for. It takes little skill to put together a card that is unique and that you can be proud of.

First off, the U.S. Postal Service says a card to go through the mail can be no larger than 4 1/4 by 6 inches and no smaller than 3 1/2 by 5 inches. In most cases, 3 1/2 by 5 1/2 is the size of choice. That translates to 4 cards per 8 1/2 by 11 printed sheet. Since you will have to deal with a local printer, you will need some specifications to give to them to find out how much it will cost for the cards.

With four cards per sheet, take the number of cards that you want and divide it by four. That gives you the number of sheets of paper required. For example, 1000 cards require 250 sheets of paper. The type of paper you select should be based on a couple of considerations. The Post Office is not especially gentle with the mail. To prevent damage to your QSL, get a good heavy paper—a cover stock or the like. There is a type of stock called Duplex because it is two pieces of paper bonded together. This is very heavy stuff and works well. Duplex usually comes with a colored front and white back. There is quite a range of colors, hopefully something that grabs your eye. As for ink, black is great—if you want colored ink, there will be a special ink charge. Now that you know how much and what kind of paper you're going to use and ink color, it's time to make up the original.

The most important rules are to keep everything black and white, (Note: colors like green, red and brown reproduce as black; they are fine for use. Avoid using blue type or art. The camera is blind to blue.) and make sure the image is crisp. Most printing today is done by

the photo-offset process which in effect takes a picture of your original and transfers it to the printing press and then to paper. If you give a nice clean image to the printer, you will get back a good clear print of your job. If you want artwork on the card, get some off of another card, out of the paper, a magazine, etc., or even draw your own picture. For the type for your call, name, QTH, etc. You can either hand letter it, cut it off your old card, get some transfer lettering at an art supply store, or go to a typesetter and get it taken care of there. When you have all the type that you need, have gotten a report form from somewhere (look in the same places you did for the art and type or do it yourself) and have any art you want, you're ready. Take a piece of paper and draw out a 3 1/2 by 5 1/2 box. Using rubber cement or a glue stick or whatever, (don't use tape if you can help it, it may get picked up by the camera), arrange and paste up your card the way you want it, and stick it down. If it is possible, make up four originals and paste them up on a single piece of 8 1/2 by 11. If you can't do this, the printer will do it for a small charge. The 4 up layout is required to get the required number of cards per sheet. I personally like having my report form on the front of the card, because it cuts my printing cost in half (it only goes through the press once, instead of twice for two-sided card), and it allows me to write a note to and address the card to my contact. For domestic QSL's this saves 7 cents postage, and with the heavy paper, your card will get there in good shape. That's all there is to it. It is just a matter of getting together what you need and doing it. Almost any printer has a selection of the papers required, and by giving him your requirements, you're on your way to getting your custom QSL on walls around the world. If you have any other questions, I'll be glad to help.

Have Fun and 73's,
Don, KBØKQ

P.P.R.A.A. DIRECTORS

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(*Two-year board terms began October 1981)

ZERO BEAT is published monthly in the interest of the members of the Pikes Peak Radio Amateur Association, Inc., Colorado Springs, Colorado. Permission is given to reprint articles or excerpts provided credit is given. Deadline for submission of articles is the 21st of the month. Classifieds accepted anytime.

The Pikes Peak Radio Amateur Association meets on the second Wednesday of every month at the First United Methodist Church, 420 N. Nevada, at 7:30 p.m. All amateurs and interested parties are invited to attend.

Editor: Don Lohse KBØKQ, 1410 E. LaSalle, Colorado Springs, CO 80907 635-7469

MEETING MINUTES

The March meeting of the Pikes Peak Radio Amateur Association was called to order by President Al Bailey ADØZ at 7:36 p.m.

In Committee reports, Bud NØDDF our CCARC delegate reported dates for swapfests around the state. The Rocky Mountain VHF Society's on May 23, the Northern Colorado ARC on June 5 in Greeley, and the Boulder swapfest on Sept. 26.

The Education committee reported that Upgrade classes will end on March 11, and new Novice classes will start on March 16th.

A sheet was passed around for volunteers to man the food booth at Swapfest.

The 20845 PPRAA net, that meets on the 1st & 3rd Wednesdays was reported to be meeting with little or no success. The comment was most people forget. REMEMBER! Give it a try — it might be fun.

Discussion of club hats and jackets, a sign up sheet for orders was posted.

Don KBØKQ, brought up the change in the mailing list due to the renewal period being up. If you didn't get a Zero Beat this past month, tell KBØKQ, and assuming you renewed your membership, he will get it corrected. Further, Don also asked the club for help in maintaining the quality of Zero Beat — someone to help get the articles together for publication. If you can give some time to help, it would be much appreciated.

After break, discussion from the members concerned responses to the club questionnaire and opinions about the state of the club, strengths and weaknesses, and ways to keep the PPRAA a strong and useful organization.

The meeting was adjourned at 9:58 p.m.

Respectfully Submitted,
Don KBØKQ for Greg KAØFOZ

MEETING NOTICE

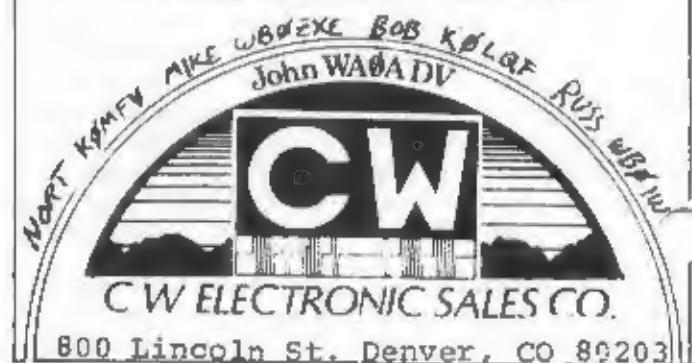
The April meeting of the Pikes Peak Radio Amateur Association will be held on April 14, 1982 at 7:30 p.m. at the First United Methodist Church, on the corner of Nevada and Boulder. The program will be on transmitter hunting, both techniques and hardware, and will be given by Doug WBØMHP, and Al ADØZ. All members and other interested persons are invited and encouraged to attend.

FOR SALE: Swan 400 with AC/DC power supply and mobile VFO. Recent factory reconditioned. \$200. Regency HR 212 2M transceiver \$40. Dave NØDV 473-0293.

Typesetting courtesy Letter Setters

If it's CW, it's communications.

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WHAT'S COOKING AT SWAP FEST?

NØCYR, Jake and WAØMNL Rosie are planning the menu to be served at the Swapfest April 18th beginning 9 A.M.

Jake will be cooking up his speciality and you don't want to miss that.

There will be coffee and soft drinks and lots of "goodies" at reasonable prices.

Bring the family and join us for lunch.

We also are asking for donations of cakes, cookies and goodies to be sold as desserts — we also could use a helping hand or two.

Please call Rosie, WAØMNL 632-5721. If no answer call Linda WAØMNM 633-5629.

FOR SALE: Two meter FM station. ICOM IC-2AT handheld with 16 button TT pad and accessories, \$230. ICOM IC-280 10 watt mobile with TT mike, \$250. Larsen mag mount with 5/8 and 1/4 wave antennas, \$10 with IC-280. Standard 146T handheld with remote mike, TT pad and charger, \$80. Call Bob, N2ARH, 599-5310.

Montrose Amateur Radio Club will offer a certificate for a large SASE on the commemoration of the Montrose Colorado Centennial. Station to work WOINS on phone: 7250, 14300, 21375. CW contacts KJOG: 7050, 14050, 21050. Times to make contacts: 0000Z 21 May—2400Z 22 May. All interested hams should try for a contact on dates, times and frequencies mentioned. Send SASE to station worked.

WDØBFZ

FOR SALE: Standard H/T 146A, desk fast charger, 16 TT pad installed, extra xtals — \$60/offer. MODEL 15 TTY with all manuals, needs selector cam — \$20. CV-89/URA-8A rec xvr for RTTY — \$15. Call Donn, WA8WXF, 472-6040 evenings.



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BOARD MINUTES

The meeting was called to order at 7:30 p.m. at the home of Les KCØNC. Attending were Al, ADØZ; Karl K4DQ; Tom, ADØO; Doug, WBØMHP; Les, KCØNC; Mark KAØJXW; Jake, NØCYR; and Bud, NØDDF.

There was discussion on the local Cablevision using the same frequencies as the amateur 2 meter band, and it was agreed that interference will be inevitable, and we must be prepared to defend our frequencies.

Jake asked for board guidance for the snack bar operation at the annual Swapfest. It was agreed the menu would be kept simple, i.e. coffee, donuts, hot dogs, chips and soft drinks.

The board unanimously approved reimbursement to Ray AAØL for the flowers he sent to an ailing member.

Zero Beat advertising rates, distribution, etc. were discussed and it was agreed that the board needs recommendations from the Editor, Don KBØKQ.

The old club records are in the hands of the board and Mark KAØJXW agreed to sort through them. He will make recommendations to the board on what should be thrown away, and what should be kept for historical purposes.

The program for April will be on transmitter hunting with Al and Doug sharing the honors.

Les' gracious wife provided delicious refreshments enjoyed by all. The board agreed to adjourn with the next meeting scheduled for Al's, 2715 Alteza Lane, at 7:30 p.m., April 19th, 1982.

Respectfully Submitted,
Bud NØDDF

For Sale: Kenwood TS 130V. Call Larry KØUKO after 6 p.m. 598-8883 Will consider trade for personal computer.

PRESS RELEASE

The Foundation for Amateur Radio, Inc., a non-profit organization with headquarters in Washington, D.C., plans to award nine scholarships for the academic year 1982-1983. The Foundation, composed of fifty local amateur radio clubs, fully funds two of these scholarships from the proceeds of the Gaithersburg (MD) Hamfest. It administers, without cost to the donors, two scholarships for the Quarter Century Wireless Association and one each for the Richard G. Chichester Memorial, The Radio Club of America, the Young Ladies' Radio League, the Edmund B. Redington Memorial and the Amateur Radio News Service. The last named award is new this year.

Radio Amateurs holding at least an FCC General Class license or equivalent may compete for one or more of these awards if they plan to pursue a full-time course of studies beyond high school and are enrolled or have been accepted for enrollment in an accredited university, college or technical school. The scholarship awards range from \$300 to \$900, with preference given in some of them to residents of specific geographical areas or the pursuit of certain study programs.

Additional information and an application form can be requested by a letter or QSL/postcard, postmarked prior to May 31, 1982 from:

Hugh A. Turnbull, W3ABC
6903 Rhode Island Avenue
College Park Maryland 20740

The FOUNDATION is devoted exclusively to promoting the interests of Amateur Radio and to the scientific, literary and educational pursuits that advance the purposes of the Amateur Radio Service.

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PERPLEXING PULSARS

Radio astronomy—a science only a half a century old has already achieved many discoveries of cosmic consequence. Many have revealed astounding astronomical anomalies.

Radio astronomy was born in 1930, when the first naturally occurring radio emissions from the sky were detected. Karl Jansky, a Bell Telephone Labs researcher, was seeking sources of irksome static in communications. He found an unexpected steady source coming from the center of the Milky Way.

By the late 1950's, radio emissions were also detected from the sun, moon and some of the planets—even from the hydrogen gas between stars. Perplexed at first, scientists determined that these radio waves are generated by such sources as ionized gas and electrons moving in magnetic fields.

Then came a find that has yet to be completely explained. In the early 1960's, astronomer Cyril Hazard located tiny sources of extremely strong radio emissions. Analysis of visible-light images suggested they were the most distant objects astronomers had ever observed. These quasi-stellar objects, or quasars, are believed by most scientists to be at the very edges of the Universe giving off more energy than any ordinary astronomical process can account for. Perhaps, astronomers suggest, matter and anti-matter are annihilating each other and releasing pure energy. Or some think, the quasars may seem so powerful because they are, in fact, relatively close to Earth. The answer remains a mystery.

In the mid-1960's, Bell researchers Arno Penzias and Robert Wilson were trying to eliminate static interrupting communications with satellites when they discovered a universal microwave radiation within the radio spectrum. Its wave-lengths were found to correspond to radiation that theorists calculate should be left over from the Big Bang, the explosion believed to be the origin of the Universe.

In 1967, British graduate student Jocelyn Bell looking for new quasars, found weird heavenly bodies giving off radio blips at precise intervals. Initially, some people favored the LGM theory; little green men were beeping signals through the Cosmos. But soon scientists established that the signals were coming from spinning neutron stars—pulsars. These focus beams of radiation—usually radio waves—in surrounding magnetic fields. The beams are thought to rotate with the star much like rotating beams in a lighthouse.

From *Science Digest*

Frank, WB⁹PAJ

MILEY'S RADIO

719 W. 7th St. Florence, Colorado 784-3040

NEW HF EQUIPMENT

Kantronics Field Day II RTTY/CW Reader \$325.
New Kantronics Micro RTTY sender \$258.
New Kenwood TS 530S \$659.
Yaesu Land Liner phone patch \$60.
Yaesu YD 844 desk mike \$30.
MFJ 260 300W dry dummy load \$25.
MFJ 250 2KW dummy load (transformer oil-no PCB) \$28.
Berscat 210 XL 18 channel programmable scanner AC/12V \$229.
Ten Tec Omni C \$1,035.
Ten Tec Delta \$735.
Ten Tec Argosy \$465.
AEA MT-1P Code Trainer p/s-chgr \$125.
AEA MT-1 Code Trainer \$90.
All AEA equipment 10% off list.
Janel QSA-5 2 meter preamp \$38.

NEW EQUIPMENT IN STOCK

Kenwood TR-7850 40W \$379.
Kenwood TR-7730 mini 25W \$297.
Kenwood TR-6400 mobile rig \$439.
Kenwood TR-2500 HT w/ ST-2 Desk Stand \$369.
New Sancet 144 2 M HT \$318.
New Sancet 440 MHz HT \$345.
Icom 25A mini size 2M w/TT mic Reg. \$369 Now \$310.
Icom 2AT HT w/ wall chgr, TT pad, niceads, duck Reg. \$269 Now \$239.
Icom 2A same as above w/o TT pad Reg. \$239 Now \$218.
Extra Icoms batteries, chrgs. & etc. in stock.
Azden PCS 3000 w/ TT pad \$288.
KDK 2025 25W w/ TT mic \$272.
New Azden PCS 300 HT \$292.
New AEA MBA RO code/RTTY Reader \$263.

USED VHF EQUIPMENT

Azden PCS 3000 w/ TT pad \$275.
Wilson MK 4 6 ch HT, wall chgr, 1 xtra battery, TT pad \$125.
(2) Wilson 1402 5M HT \$100.
w/ desk charger \$125.
each 2 meter linear \$35.
Telco Commander 180-2 meter FM amp. 10 in 80 out \$80.

MEMBERSHIP APPLICATION

On the bottom of page 5 is the membership form for the club for 1982. Dues remain the same as last year — \$12.00 for single and \$15.00 for family membership. Please fill in all the information so our records are correct. Members have until March 1 to renew their membership so as not to miss any Zero Beat issues. Take a moment and fill out the form — so you don't forget to later.

Membership Application PIKES PEAK RADIO AMATEUR ASSOCIATION

Name _____

Address _____

City _____

Call _____

ARRL Member _____

State _____ Zip _____

License Class _____

Telephone _____

Additional Names _____

Calls _____

Associate Member \$8.00

(Outside Teller & El Paso Counties.)

Icom 211 2 meter FM-CW-SSB, AC & DC \$349.
Kenwood TR-7800 \$300.

Portables

Drake TR 22, mic, LC case, charge cord & mobile cord \$65.

USED HF EQUIPMENT

Yaesu FT-101 EX-mint-spent \$150 on factory recond. \$625.

Yaesu FT-101 E-nice condition \$565.

Drake TR4C Xcvr, excellent cond., no p/s. Factory recondition 6 mos. ago cost \$150. \$325

Drake 2B rcvr, nice condition \$125.

Drake R4A, T4X, MS-4 p/s & spkr. Transceives as pair & ETEK FR-4 Digital Readout. All cables, extra set of all tubes including finals. All for \$575.

7 xtra crystals with R4A

R4A separate \$225.

T4X separate \$225.

FR4 Digital Readout \$150.

Kenwood TS 520 80-10 mtr. Xcvr, AC/12V. Nice condition \$475.

Swan WM 3000 2KW peak reading watt/SWR meter 110 AC \$70.

Astro RS7-A regulated 7 amp p/s \$50.

Hallicrafter S40B Gen. Cov. Rcvr. \$65.

Hallicrafter SX 110 Gen. Cov. Rcvr. \$65.

Hallicrafter S 120 Gen. Cov. Rcvr. \$50.

Hallicrafter SR 150 80-10 mtr. Xcvr. w/ p/s and speaker in matching cabinet-mike and manual \$250.

Heath HW 101 80-10 mtr. Xcvr, p/s, mike \$250.

TELEVISION

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TELEVISION

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CONSIGNMENTS

Consignment accepted w/ 10% commission

Heath SB 300 Rcvr w/ 2 mtr conv. 80-10 mtr. Ham rcvr, all filters \$150.

Hallicrafter HT 37 80-10 mtr. transmitter w/ TR relay \$100.

Homebrew 900W linear. 4-811A's, small sized and good power.

P/S 9 1/2 w X 13 1/2 d X 12 h. Amp 10 w X 14 d X 11 h \$200.

ADVERTISING NOTICE

Zero Beat will gladly run any classified ad submitted to it. However, classifieds will run for one month only, unless the advertiser notifies Zero Beat to continue the ad. If more than one item is listed, please keep us informed as to what sold, so that the ads are accurate. Commercial advertisers are welcome to change or update their ads whenever necessary. The ads in Zero Beat are useful to our readers, let's keep them up to date and accurate.